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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,604	09/27/2001	Eli Razon	RAZON-010	9362

7590 01/26/2005
John B. Sowell
182 Midfield Road
Ardmore, PA 19003-3213

EXAMINER

HAMILTON, ISAAC N

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,604

Applicant(s)

RAZON, ELI

Examiner

Isaac N Hamilton

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 12-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group 1, claims 1-3 and 5-11 in the reply filed on 11/12/2004 is acknowledged. The traversal is on the ground(s) that there is no prior art disclosing the instant application. This is not found persuasive because several references of prior art have been found and are applied to the rejections below.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The objections to the drawing are hereby withdrawn.

Specification

3. The disclosure is objected to because of the following informalities: "understand" on page 6, line 11, should be changed to --understood--; "poption" on page 11, line 22, should be changed to --portion--.

Appropriate correction is required.

Claim Objections

4. Objections to the claims are hereby withdrawn.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3724

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-3, 5-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the outer cutting saw blade" in line 21. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "said voice coil actuating means" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cromeens (3,750,513). Cromeens discloses spindle housing 21; cutting saw 2; coaxial spindle 1, 12-15, 16; center spindle 16; first mounting means 27; first cutting saw blade 11; outer hollow spindle 12-15; second mounting means 23-26; motor is inherently driving element 21; spindle positioning means 5; dicing saw blades 7-11; saw blades 7-11 are capable of dicing wafers and singulating wafers.

Claim Rejections - 35 USC § 103

Art Unit: 3724

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (4,691,749) in view of Cromeens '513. Reuter discloses spindle housing 7; cutting saw in figure 1; coaxial spindle 5, 10; center spindle 10; first mounting means juxtaposed elements 11 and 10; first cutting saw blade 11; outer hollow spindle 5; second mounting means 4; motor 16; spindle positioning means 22; dicing saw blades 11, 12; saw blades 11, 12 are capable of dicing wafers and singulating wafers; second spindle housing/blades/spindles in figure 1; coupling of motor to spindles via belt drives 14 and 20; movable actuating arm juxtaposed 10 and 22. Reuter does not disclose the same rotational speed. However, Cromeens discloses the same rotational speed in column 1, line 13. It would have been obvious to provide the same rotational speed in Reuter as taught by Cromeens in order to manipulate the workpiece in the same way with each of the blades.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Reuter and Cromeens as applied to claims 1, 2 and 11 above, and further in view of Ono (4,688,540). The combination discloses everything as noted above, but does not disclose two spindle housings mounted side-by-side and does not disclose spindle housings independently moveable in Y and Z axes. However, Ono teaches two spindle housings 134, 136 mounted side-by-side in figure 3 and teaches spindle housings independently moveable in Y and Z axes in columns 9-11, lines 49-21. It would have been obvious to provide two spindle housings

Art Unit: 3724

mounted side-by-side and spindle housings independently moveable in Y and Z axes in the combination as taught by Ono in order to improve cutting efficiency. Note column 2, lines 55-58.

11. Claims 5, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Reuter and Cromeens as applied to claims 1, 2, 10 and 11 above, and further in view of Kraft et al (4,455,910), hereafter Kraft. The combination discloses everything as noted above, but does not disclose an air bearing. However, Kraft teaches air bearing 22, 22'. It would have been obvious to provide an air bearing in the combination as taught by Kraft in order to minimize the forces used to move the hollow spindle. It is to be noted that the air bearings replace the bearing 9 of Reuter.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Reuter, Cromeens, and Kraft in view of Mueller et al (5,024,127), hereafter Mueller. The combination discloses everything as noted above, but does not disclose a voice coil actuating means. However, Mueller teaches voice coil actuating means 34. It would have been obvious to provide voice coil actuating means in the combination as taught by Mueller in order to provide an actuating means which provides substantial moving power and speed while requiring relatively low electrical power and space. Note column 1, lines 65-68.

Response to Arguments

13. Applicant's arguments with respect to claims 1-3 and 5-11 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3724

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cromeens '244 is cited for similar structure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac Hamilton whose telephone number is 571-272-4509. The examiner can normally be reached on Monday through Friday between 8am and 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 3724

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IA

IH

January 24, 2005

all

Allan N. Shoap
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Group 3700